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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,820	04/06/2001	Kiichirou Wakamatsu	12894/004001/56059-US	6362
27572	7590	12/22/2003	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			DEAN, RAYMOND S	
		ART UNIT	PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/827,820	WAKAMATSU, KIICHIROU	
	Examiner Raymond S Dean	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 - 16 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1 - 16 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) The translation of the foreign language provisional application has been received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because there is no function key with the reference number F18 in Figure 1. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 5, 8, 9, 11, and 14 – 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Naito et al. (US 2001/0005686 A1).

Regarding Claim 1, Naito teaches a mobile phone powered by a battery having a communication function and an additional function (Abstract, Figure 1, Section 0020, Section 0021) the mobile phone comprising: means for determining whether a level of a battery capacity is lower than a threshold level for permitting operation of the additional

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function (Section 0007, Section 0008, Section 0009); means for detecting a signal indicating operation of the additional function (Section 0010, Section 0011, since the CPU controls the operation of the function processing unit the CPU knows the operating status of each function processing unit thus the CPU inherently detects a signal that indicates the operation status of said function processing units); and means for informing a user of restriction of the additional function when the battery capacity is lower than the threshold level and the signal indicating operation of the additional function exists (Section 0024, Section 0027).

Regarding Claim 4, Naito teaches a mobile phone powered by a battery having a communication function and an additional function (Abstract, Figure1, Section 0020, Section 0021), the mobile phone comprising: first means for determining whether a battery capacity is lower than a first level; first means for restricting operation of the additional function when the battery capacity is lower than the first level; second means for determining whether the battery capacity is lower than a second level which is lower than the first level; and second means for restricting operation of the communication function when the battery capacity is lower than the second level (Section 0026, each level corresponds to an additional function).

Regarding Claim 5, Naito teaches all of the claimed limitations recited in Claim 4. Naito further teaches a means for informing a user of restriction of the additional function when the battery capacity is lower than the first level (Section 0024, Section 0027).

Regarding Claim 8, Naito teaches all of the claimed limitations recited in Claim 4. Naito further teaches a means for detecting whether the additional function is being operated wherein the first restricting means terminates the operation of the additional function when the additional function is being operated (Section 0010, Section 0011, since the CPU controls the operation of the function processing the CPU knows the operating status of each function processing unit thus the CPU inherently detects the operation status of said function processing units).

Regarding Claim 9, Naito teaches all of the claimed limitations recited in Claim 5. Naito further teaches a means for detecting whether the additional function is being operated wherein: the informing means includes a visual display panel for displaying the restriction of the additional function thereon (Section 0024, Section 0027); and the restriction is displayed on the display panel as a sign to prohibit the operation of the additional function when the additional function is not being operated (Figure 2, Section 0029, Section 0030, Section 0031, Section 0032, Section 0034, the battery charge detecting unit checks the charge level of the battery and compares said charge level to the power supply limiting values at constant intervals therefore whenever there is a charge level that is lower than any of the power supply limiting values there will be a warning sign informing the user of the mobile phone regardless of whether or not the additional functions are in a operation mode).

Regarding Claim 11, Naito teaches all of the claimed limitations recited in Claim 4. Naito further teaches a third means for determining after the first restricting means restricted the additional function, whether the battery capacity is higher than a third level

which is higher than the first level; and means for canceling the restriction of the additional function when the battery capacity is higher than the third level (Section 0026, since the additional function can be restricted when the battery charge is below the power supply limiting value of said additional function the corollary of unrestricting said additional function when the battery charge is higher than said power supply limiting value is also true thus this method is inherent).

Regarding Claim 14, teaches a mobile phone powered by a battery having a communication function and at least one additional function (Abstract, Figure 1, Section 0020, Section 0021), the mobile phone comprising: first means for determining whether a battery capacity is lower than a first level; means for informing to a user that the battery capacity is lower than the first level when such is determined by the first determining means; second means for determining whether the battery capacity is lower than a second level which is lower than the first level; and means for restricting operation of the communication function when the battery capacity is determined to be lower than the second level by the second determining means (Section 0024, Section 0026, Section 0027, each level corresponds to an additional function).

Regarding Claim 15, Naito teaches all of the claimed limitations recited in Claim 14. Naito further teaches a means for restricting operation of only the additional function when the battery capacity is determined to be lower than the first level by the first determining means (Section 0026).

Regarding Claim 16, Naito teaches all of the claimed limitations recited in Claim 14. Naito further teaches an informing means that informs to the user that operation of

only the additional function is restricted when the battery capacity is determined to be lower than the first level by the first determining means (Section 0024, Section 0026, Section 0027).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito et al. (US 2001/0005686 A1) in view of Willey (6,041,241).

Regarding Claim 2, Naito teaches an informing means after the battery capacity of an additional function becomes lower than the threshold level (Section 0024, Section 0026, Section 0027).

Naito does not specifically teach an informing means that includes means for inquiring user's intention whether to continue the operation of said additional function.

Willey teaches an informing means that includes means for inquiring user's intention whether to continue the operation of a function (Column 5 lines 20 – 30, the user has a choice).

Naito and Willey both teach the method of informing the user of a mobile terminal when there is a power conservation issue. Naito also teaches the use of additional informing means that can be performed with respect to an additional function (Section

0027). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to make a design preference and use the informing means taught by Willey in place of the informing means of Naito as an alternative for informing the user when the battery charge value is lower than the power supply limiting value.

Regarding Claim 10, Naito teaches all of the claimed limitations recited in Claim 9. Naito does not specifically teach a means for selecting either to follow or not to follow the prohibiting sign displayed.

Willey teaches a means for selecting either to follow or not to follow a prohibiting sign that is displayed (Column 5 lines 20 – 30, the user has a choice).

Naito and Willey both teach the method of informing the user of a mobile terminal when there is a power conservation issue. Naito also teaches the use of additional informing means that can be performed with respect to an additional function (Section 0027). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to make a design preference and use the informing means taught by Willey in place of the informing means of Naito as an alternative for informing the user when the battery charge value is lower than the power supply limiting value.

6. Claims 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito et al. (US 2001/0005686 A1) in view of Nonogaki (US 6,625,478 B1).

Regarding Claim 3, Naito teaches a mobile phone powered by a battery having a communication function and an additional function (Abstract, Figure 1, Section 0020, Section 0021), the mobile phone comprising: means for determining whether a level of a

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battery capacity is lower than a threshold level for permitting operation of additional function; and means for terminating operation of the additional function and for informing a user of that effect when the battery capacity becomes lower than the threshold level during a period in which the additional function is being operated (Section 0007, Section 0008, Section 0009).

Naito does not specifically teach an additional function that is a music producing function.

Nonogaki teaches a music producing function (Column 4 lines 7 – 15).

Since Naito and Nonogaki both teach mobile terminals with multiple functions and Naito also teaches a mobile terminal that can have various functions (Section 0020) it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the additional music producing function taught in Nonogaki to the mobile terminal in Naito such that the user could have a mobile terminal with multimedia capability.

Regarding Claim 6, Naito teaches all of the claimed limitations recited in Claim 5.

Naito does not specifically teach an additional function that is a function for producing music sounds.

Nonogaki teaches an additional function that is a function for producing music sounds (Column 4 lines 7 – 15).

Since Naito and Nonogaki both teach mobile terminals with multiple functions and Naito teaches a mobile terminal that can have various functions (Section 0020) it would have been obvious to one of ordinary skill in the art at the time the invention was

made to add the additional music producing function taught in Nonogaki to the mobile terminal in Naito such that the user could have a mobile terminal with multimedia capability.

Regarding Claim 7, Naito in view of Nonogaki teaches all of the claimed limitations recited in Claim 6.

Naito teaches an informing means that informs the user of the restriction of an additional function through warning sounds through a speaker (Section 0024, Section 0026, Section 0027, since the only output for the audible warning is the speaker said audible warning would inherently be superposed on any other audio signal that is transmitted simultaneously).

Naito does not specifically teach a music producing function.

Nonogaki teaches a music producing function (Column 4 lines 7 – 15).

Since Naito and Nonogaki both teach mobile terminals with multiple functions and Naito teaches a mobile terminal that can have various functions (Section 0020) it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the additional music producing function taught in Nonogaki to the mobile terminal in Naito such that the user could have a mobile terminal with multimedia capability.

7. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naito et al. (US 2001/0005686 A1) in view of Cathey et al. (US 6,201,977 B1).

Regarding Claim 12, Naito teaches all of the claimed limitations recited in Claim 4.

Naito teaches a first determining means and second determining means that determines the battery capacity (Section 0008, Section 0026).

Naito does not specifically teach a first and second determining means that determine the battery capacity based on a terminal voltage of the battery.

Cathey teaches a determining means that determines the battery capacity based on a terminal voltage of the battery (Column 3 lines 3 – 8, the sensing circuit inherently detects the voltage level of the battery so that it can be compared to the predetermined voltage level).

Naito and Cathey both teach a determining means that determines the battery capacity of a battery such that power conservation is maintained. It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to use the voltage level determining method taught in Cathey in the battery charge detecting unit in Naito such that there is an accurate measurement of the battery charge level of the battery in Naito.

Regarding Claim 13, Naito teaches all of the claimed limitations recited in Claim 11.

Naito teaches a first, second, and third determining means that determines the battery capacity (Section 0008, Section 0026).

Naito does not specifically teach a first, second, and third means that determines the battery capacity based on a terminal voltage of the battery.

Cathey teaches a determining means that determines the battery capacity based on a terminal voltage of the battery (Column 3 lines 3 – 8, the sensing circuit inherently detects the voltage level of the battery so that it can be compared to the predetermined voltage level).

Naito and Cathey both teach a determining means that determines the battery capacity of a battery such that power conservation is maintained. It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to use the voltage level determining method taught in Cathey in the battery charge detecting unit in Naito such that there is an accurate measurement of the battery charge level of the battery in Naito.

Conclusion

8. Any inquiry concerning this communication should be directed to Raymond S. Dean at telephone number (703) 305-8998.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

Hand -delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

